peak velocity (SPV) at diagnosis was 25.2 ± 16.1 cm/s, and 15.82 ± 10.5 at 6 months. Of those with persistent Doppler signal, 2 were big, 1 developed metastasis and 4 regressed. 8 avascular tumors at diagnosis experienced new vascularization: 1 recurred, 7 regressed and 4 of them developed neovascular glaucoma (NVG). Reduction in thickness was bigger when tumors vascularized, lost Doppler signals. SPV decreased significantly at 6 months ($p = 0.028$), but not the diastolic peak ($p = 0.116$).
*Conclusion*. Doppler scan is an important tool in the management of melanoma after plaque. Majority of tumors lost its Doppler signal in the first 6 months. Persistent intratumoral vessels are associated to big tumour size, recurrence or vascular congestion. New vascularized cases can be explained by persistence of old vessels, recurrence or NVG. We recommend supporting these findings with the current tests in direct ophthalmoscopy and ultrasound.

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**External-radiotherapy plus HDR-brachytherapy in prostate cancer: ICO long-term outcome**

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*Purpose*. The aim of this study was to evaluate the efficacy and toxicity of combining external beam radiation therapy (EBRT) and high-dose-rate brachytherapy (HDRB) as a boost, in terms of biochemical relapse in patient (pts) with prostate cancer.
*Methods and materials*. From 2002 to July 2012, 377 pts with a diagnosis of intermediate-high risk prostate cancer were treated with EBRT followed by supplemental HDRB. The characteristics were: mean age 65.78 (41–86 years), Gleason was 7 in 191 pts (50.7%) and 8 or higher in 131 (35%), 226 pts. (60%) had a PSA > 10 ng/ml, T3 stage 263 pts (70%), T2 64 (17%) and T1 49 (13%). The EBRT total mode dose was 60.0 Gy (45–70 Gy) on prostate and seminal vesicles. 120 pts (31%) also received a mode of 46 Gy (45–50 Gy) on minor pelvis. All pts received a mode single-fraction of 9 Gy (9–15) of HDRB-boost. Complete androgen deprivation was given to 353 pts (93.63%).
*Results*. The mean follow-up was 48.72 months (6–126). The 5 and 7-year actuarial overall survival was 88% (CI 95%: 84–92) and 75% (CI 95%: 68–83). Cause specific survival at 5 and 7 years was 98% (CI 95%: 97–99) and 97% (CI 95%: 96–98) respectively. Disease free survival was 93% (CI 95%: 89–97) and 91% (CI 95%: 87–95). The 5 and 7-year biochemical free relapse was 91% (CI 95%: 87–95) and 89% (CI 95%: 83–95). The gastrointestinal grade 2–3 late-toxicity was observed in 17 pts (4.6%) and 6 pts (0.8%) respectively. Genitourinary grade 2–3 toxicity was observed in 46 pts (12.2%) and 3 pts (1.6%).
*Conclusion*. The findings after long-term follow-up of intermediate-high risk prostate cancer pts treated with EBRT plus supplemental HDRB boost confirmed the effectiveness of this fractionation schedule in terms of discomfort, treatment-related toxicity and biochemical control.

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**HDR brachytherapy as monotherapy for prostate cancer: Preliminary toxicity data**

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*Objective*. To evaluate the feasibility and toxicity of high-dose-rate (HDR)-brachytherapy (BT) as monotherapy in a prospective clinical trial consisting of a single implant and two fractions (13.5 Gy × 2) for a total dose of 27 Gy, delivered within 1 day for localized prostate cancer. We report the acute and early chronic genitourinary (GU) and gastrointestinal toxicity (GI).
*Methods and materials*. A total of 78 patients were treated between November 2010 and December 2012. A Phase II trial of monotherapy HDRB performed for localized prostate cancer using a single implant and two fractions (13.5 Gy × 2) for a total dose of 27 Gy calculated to be radiobiology of HDRB regimens and BED to 261 Gy in 2 Gy fractions ($\alpha/\beta$ ratio of 1.5 Gy). All patients had clinical Stage T2c or less (AJCC, 5th edition), Gleason score 4–7 (3 + 4), PSA level of ≤15 ng/mL. CT scans were done for dosimetry. GU and GI toxicity were evaluated by CTCAE V 3.0. The highest toxicity scores and self-reported sexual function (patients without BAC) were recorded during follow-up.
*Results*. Median follow-up was 9.32 months (range: 2.23–26.07). Grade 1–2 GU acute toxicity was 20.51%, mainly frequency/urgency (14.1%), dysuria (7.7%), hematuria, dribbling/hesitancy (1.3%). One patient required a Foley catheter during 1 week. No acute GI toxicities were recorded. The most common early chronic toxicity was Grade 1 urinary frequency/urgency in 1.3% and Grade 2 dysuria in 7.7% of patients; 1 patient had Grade 2 rectal bleeding, 1 had Grade 4, requiring RTU. Twenty-eight patients without BAC reported potency before therapy; No one of them developed sexual impotence.
*Conclusions*. A single implant HDR-BT to 27 Gy in two fractions within 1 day for localized prostate cancer is feasible with minimal acute or late toxicity. Longer follow-up is needed to confirm these encouraging early results.

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